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JOINT INFLUENZA COMMITTEE.

The Surgeon General of the Army, the Surgeon General of the Navy, the Surgeon General of the Public Health Service, and the Director of the Census have designated officers from their respective departments to form a joint influenza committee. The members of the committee are as follows:

Bureau of the Census.—Dr. William H. Davis (chairman), Mr. C. S. Sloane.

Public Health Service.—Dr. Wade H. Frost, Mr. Edgar Sydenstricker.

United States Navy.—Lieut. Commander J. R. Phelps, Surg. Carroll Fox.

United States Army.—Col. D. C. Howard, Col. F. F. Russell, Lieut. Col. A. G. Love.

The functions of the committee are to study the epidemic and to make comparable, so far as possible, the influenza data gathered by the Government departments.

A UNIFIED HEALTH SERVICE.[1]

By B. S. WARREN, Assistant Surgeon General, United States Public Health Service.

Within certain limitations a people can have such hygienic conditions as they choose to buy. In other words, "hygienic conditions" are purchasable, and they are safe-paying investments. No State government should delay making such investments on account of the cost. It is now well known from many demonstrations that even under the worst conditions a reasonable expenditure of public funds will afford such protection against disease as to pay large dividends, not only in the saving in human life and suffering but also in dollars and cents.

It is hardly necessary to tell an Alabama audience that Gorgas, Carter, and their assistants made the Panama Canal possible. This demonstration was a wonderful achievement and of itself should be sufficient to cause Gorgas's native State to profit by the example and invest in health work which, beginning at the capital, would reach into the remotest community of the State.

[1] Read before the Birmingham (Ala.) Civic League, Jan. 13, 1919.

Of more recent date, and nearer home, is the health work which protected the soldiers in the camps of this country during the mobilization of the millions of men. By the cooperation of the military and civil health authorities there were established in the camps and zones about the camps, health organizations which controlled the communicable diseases in a record-breaking degree for armies in the field.

Within the boundaries of the camps themselves the Army health authorities were responsible for proper hygienic conditions. In the extra-cantonment zones the Public Health Service, in cooperation with State and local health authorities, was responsible. But all worked together and the results may well be called a "unified health service." Aided by funds from the American Red Cross and local authorities, the Public Health Service established complete health organizations in 51 extra-cantonment zones. In all, the Public Health Service expended $1,201,909, the American Red Cross $507,000, and the States and local authorities, $650,000. The civil population protected by these organizations was approximately three and three-quarter million persons, in addition to the military population. It is not possible here to enumerate all of the work done, but to illustrate: Two thousand five hundred miles of ditches were dug and 1,200 square miles of swampy territory drained, and an antimosquito zone—1 mile in width—was established around each camp. It is a well-known fact that malaria, which was a serious potential disability factor about many of these camps, was practically eliminated from the soldier population, and only 3,160 cases were reported to the Public Health Service during the malarial season of 1918 among the civil population of three and three-quarter million, a rate of 83 per 100,000. From such data as were obtainable for previous years this was a tremendous reduction in the malarial rate in these communities. These results may well be compared with those in Panama, especially since they were obtained not under military conditions, but through the voluntary work of a civil population.

In considering whether or not an adequate health machine is worth while it is well to examine the health records and weigh the value of the results to be expected according to the following standards:

1. The human standard of sorrow and suffering caused by preventable diseases;
2. The actual cost in money of preventable sickness; and
3. The saving to the State of the economic values lost in preventable sickness and death.

One can not place a money value on the sorrow endured by a mother over her baby dead from a preventable cause, nor on the sorrow caused by a defective or blighted child, due to preventable

causes. Still, we know that annually over 16 per cent of all deaths in the United States are in infants under 1 year of age, most of which are preventable, and, further, we know that over 30 per cent of the boys in the draft age, 21 to 31, were rejected on account of physical or mental defects, a large proportion of which could have been prevented by proper attention in infancy and childhood. Over 4,000 infants under 1 year died in Alabama in 1916. Half of these deaths could have been prevented by a reasonably adequate pre and post natal health care. I wonder whether each one of those mothers would have been willing to have paid $100 to save those babies. If so, I am sure your State health officer would be glad to have had the $200,000 in order to make effective his plans to save the babies.

As to actual cost in money of preventable sickness, consider one item: The death rate in Alabama for the year 1917 from typhoid fever was 38 per 100,000 population, or a toll of 898 deaths and at least 8,980 cases of the disease. At a cost for the doctor's bill and time lost from sickness of $100 per case of the disease, the total cost was $898,000. A proper support of your State and local health administration with funds and personnel could be expected to reduce the rate to five per 100,000 and save $780,000 per annum. That item alone would pay the cost.

Concerning the economic values which would accrue to the State by preventing a reasonable amount of the preventable sickness and death, it may be safely stated that if Alabama would free itself from malaria the increase in the taxable values of the State would meet all the expense.

In the matter of health organization some analysis of the responsibilities and relations of the several governmental agencies is necessary in order to determine the character of organization which would result in a "unified health service." With our form of government, the Federal, State, and local political subdivisions have certain responsibilities. Within each of the governmental administrations there are several departments, bureaus, or divisions which have definite relations to health. Furthermore, the legislative branches (Federal, State, and local) have definite relations and responsibilities. In framing any health legislation all of these must be considered and worked out so that the proposed organization will function harmoniously, and result in a "unified health service."

In the beginning of this discussion it may be well to realize that a perfect health machine is not to be expected, but it should be planned so that it will be elastic and easily adjusted, as changing conditions or experience of operation may indicate. It would therefore seem relevant to discuss (1) the Federal, State, and local governmental responsibilities, and (2) the relations to the departments, bureaus, or

divisions which are more or less directly interested in the health of the people.

The Federal Government has at least three definite responsibilities in the field of public health—international control of disease, interstate control of disease, and a general interest in the health of all the people from the general welfare point of view. For the international control it operates the maritime quarantine, and supplements this by the work of its consular service and the detail of Public Health Service officers to the places which are likely to become a menace. For the interstate control of disease, the Federal Government under several acts of Congress undertakes certain measures, mainly through cooperation with State and local health authorities, and uses the Public Health Service for this purpose. In the past, the Public Health Service has largely confined itself to measures of control after the disease needing control had gained a foothold in a State and become a menace to other States. Under more modern methods, however, it has realized that its activities should be aimed at these diseases long before they become a menace. As an example of the latter methods, the Service is inaugurating a system of control of water supplies furnished to the traveling public by interstate common carriers. As a part of its general welfare interest, the Congress has authorized the Public Health Service to investigate the diseases of man and the conditions influencing their propagation and spread, including sanitation and sewage, and the pollution of lakes and navigable streams.

The State, like the Federal Government, has at least three responsibilities in the field of public health—the prevention of the introduction of disease from without, the control of the intercounty, or intermunicipal spread of disease, and the health of all the people within the State from a general welfare point of view. These responsibilities can be met only by some degree of State control over local health conditions. This control should be more than advisory and should be applicable at all times within the localities and not limited to the times and places when and where there is a menace to other localities.

The local government administrations also have at least three responsibilities in the health field—the prevention of the introduction of disease from without, the control of disease within the jurisdiction, and the health of the people from a general welfare point of view.

From the above it would seem that Federal, State, and local health authorities in some degree have identical responsibilities. Then, if we are to have a "unified health service" there should be very close cooperation on account of this community of interest; in fact, why not form a joint partnership and work together for the one service—prevention of disease? For example, a case of typhoid fever in a remote rural district of Alabama is a matter of joint interest to the

county, State, and Federal health authorities. The typhoid germ does not recognize county or State lines and may find its way into intra and interstate traffic and cause the loss of many human lives and the expenditure of large sums of State and Federal funds. The rational procedure would be to form the partnership and prevent or control all preventable diseases at their source. In the formation of this partnership due consideration must be given in its organization to the other departments, bureaus or divisions and groups of people which are more or less directly interested in health work. The most important of these may be mentioned as follows: The medical profession, and an adequate medical service for all the people; the child welfare agencies and the prevention of infant mortality; the department of education and the health supervision of the school children; the Department of Labor and the health of the workers; the Department of Agriculture and the rural health; the various groups interested in the control of special disease, like venereal diseases, tuberculosis, etc.

In these days of progress in preventive medicine there is some tendency to separate too sharply the preventive from curative medicine. It should not be forgotten that an adequate medical service to the whole people will do more to prevent disease and disability than any other single measure to be considered. At present the people in the United States are paying out money sufficient for the maintenance of an adequate medical service, but fail to receive it. This money, however, is spent in such a haphazard manner that the service is not only often inadequate or worthless but at times actually harmful. For one item—drugs—the United States spends $500,000,000 a year. This sum alone, if properly expended, would buy all necessary drugs and add $2,000 a year to the income of each of the 125,000 physicians in active practice in the United States. It may be safely stated that an adequate medical service can not be had except in our medical centers, and in these centers only the rich and some of the charity patients receive such service. The great middle class can not afford such expense. Since the people as a whole are paying the price for the best, there should be no reason why they should not have the best. With a proper organization, distribution, and training of the medical and sanitary personnel of the country, and a proper expenditure of the funds now being spent for medical purposes, there would be available, to every person, adequate medical and hospital services and supplies. With such service closely coordinated with, or forming part of, the health department, it needs no argument to show that disease prevention would begin at the source—the bedside, and eliminate a large proportion of disease spread.

In some governmental administrations there have grown up, outside of the health departments, child-welfare agencies which have practically taken over the matter of prevention of infant mortality. These agencies may have assumed this responsibility, but health departments can not thus escape their responsibility for infant health. This is but a part of the whole question of public health, and child welfare agencies must be auxiliary to health departments or be made a part of them in so far as the infant health is concerned. Without doubt these activities should be so correlated as to prevent duplication of work, and that part of the work which relate to medical and sanitary matters should be the particular province of the health department.

The relations of the departments of education to health departments have likewise to be considered in any unified health-service program. Like child-welfare agencies, the departments of education in some jurisdictions have taken on health functions and have organized school-hygiene divisions, more or less independent of the health departments. Where the school-hygiene divisions are doing good work the organization should be utilized, but it should be brought under such relation to the health departments that it would be auxiliary to that of the health department. So far as the internal school administration is concerned, it may be necessary to have the health work under the immediate control of the school boards, but the standards governing the health work should be fixed by the health departments. Furthermore, the medical inspection of the children should be under such supervision by the health department that the findings may be of the greatest service in the control of disease. It should be clearly recognized that the health departments are responsible for health conditions in all age groups, and that those in the school-age group are not to be excepted. Further it should also be clearly recognized that only the questions of health which relate to the child's ability to attend school regularly and to learn his lessons are the concern of the school authorities, and only then in so far as they are responsible for the efficient expenditure of educational funds.

Industrial hygiene is another subject which must be given careful consideration in working out a unified health-service program. All labor departments are vitally concerned in this subject. The War Labor Board announced as one of the principles governing its awards, a living wage sufficient to maintain a family in health and comfort. With such a recognition of the importance of health it then becomes the duty of the health departments to work out the standards of health in industry and to cooperate with the labor departments in their enforcement. In this group of the population, as in school children, it should be clearly recognized that the health departments

are responsible for the health of all the people and that the industrial workers are no exception. Labor departments should not therefore organize independent health bureaus or divisions but should call upon the health departments to do this work for them.

In the matter of rural hygiene, there has been much study and investigation of rural health conditions. These have shown the great need of permanent health organization in this field. The results obtained by such organizations under intelligent direction have demonstrated their value, but progress is slow. Something must be done to stimulate the development of rural hygiene. The Federal and State authorities, as well as the local governments, have a definite responsibility and should make common cause of this work and agree on a working plan which will place rural health service at least on a par with urban health work, as exemplified in our progressive city health departments.

Before leaving this question of the relation of health departments to other departments, bureaus, and agencies, it would be well to remember that the volunteer and endowed health agencies will be found to be a great help in developing a "unified health service" if they are utilized in a proper manner. In all places where to-day they exist they should be consulted and some practicable plan worked out for using them and bringing them under proper governmental control. At present some of these agencies are developing independent organizations which are exercising some sort of direction in Government health affairs. In a democratic government there should be no agency directing governmental administration which is not responsible to the people. Such agencies must be controlled and made auxiliary to Government administration.

Referring now to State health organizations, I may say that Surgeon Carroll Fox, of the United States Public Health Service, has made intensive studies of many State health organizations and, upon the request of the several State authorities, has submitted recommendations for their improvement. A review of these reports shows a striking uniformity in most of the essential recommendations, which are about as follows:

1. All health activities should be brought together into one department—the health department.

2. There should be a small State board of health (seven) with advisory and quasi-legislative functions, appointed for a definite term of office (seven years), with the terms so arranged that only one term will expire within one year.

3. There should be one chief executive of the health department, who should be held responsible for the proper administration and enforcement of all the health laws and regulations. He should be a man skilled in knowledge of preventive medicine, with experience in

health work and health administration. He should be appointed for a term of years (six), and his tenure of office should be subject only to efficiency and good behavior. He should give all of his time to his office and not engage in the private practice of his profession.

4. The department should be composed of bureaus or divisions in charge of chiefs who give all of their time to their work. The bureaus or divisions recommended vary somewhat according to States, but are generally as follows (the names indicating the functions): (*a*) Vital statistics; (*b*) communicable or preventable diseases, or epidemiology; (*c*) public-health engineering; (*d*) infant welfare, or child hygiene and school hygiene; (*e*) health education; (*f*) food and drugs; (*g*) industrial hygiene; and (*h*) administrative or clerical.

The number of bureaus or divisions and the duties vary according to States, depending upon local conditions. I should state that it is highly advisable to leave the number and duties of the divisions to the discretion of the department, to be created as necessity arises.

5. The State should be divided into convenient health districts, varying according to local necessity from 4 to 20, each district to be in charge of an all-time district health officer. Under the direction of the health department these officers should have sufficient authority over local health administration in their districts to enforce the State health laws and regulations, but not thereby relieving the local health authorities of their local responsibility.

6. The appointment of all chiefs of bureaus or divisions, district health officers, engineers, scientific personnel, public health nurses, and employees should be for a probationary period and after satisfactory examination. These appointments should be permanent, subject to efficiency and good behavior. The field officers should constitute a mobile corps subject to change of station within the State. In addition to the value of a trained health personnel, Fox seems to stress in his reports the value of public health nurses and advises their employment in such numbers as the appropriation will warrant.

7. There should be an annual conference of the State field forces and local health officers with the health department.

8. In the matter of amount of appropriations, Dr. Fox varies his recommendations considerably, but states that where practicable 2 per cent of the State revenue should be devoted to State health work, and 2 per cent of county revenues to local health work. But in the cities a larger per cent would be required for city health work.

9. Concerning laws and regulations governing measures for disease reporting and control, milk supplies, water supplies, sewage disposal and the like, the recommendations are numerous and vary considerably according to local conditions.

The above recommendations, as outlined, are very generally accepted by health workers as the basic principle upon which to build a State health department, and such States as New York and Massachusetts, with health departments based on practically the same principles, have been operating long enough to demonstrate their practicability and effectiveness. But the Public Health Service realizes that each State presents many individual problems and therefore would not recommend a plan for any State without a very careful study of State and local conditions.

In most of the States, outside of the larger cities, the local health organization is for the most part a question of part-time service by the health officials, though some counties now have all-time health officers who are demonstrating their value. While waiting for this progressive spirit of public health service to reach out into all the counties the district health officers of a State organized as outlined above can make much progress, especially if the local organizations can afford the services of a full-time public-health nurse to place under his direction.

In the development of rural county health work on the basis of a partnership between the Federal, State, and local authorities, the Public Health Service already has a small annual appropriation to put into this activity. This amount is to be used for demonstration purposes. In a county with 20,000 population the sum of $6,000 (the Federal, State, and local government each appropriating a third) would provide an all-time organization of a health officer, one inspector, and one public-health nurse.

Whether urban or rural, and whether organized on a part-time or an all-time service basis, the local health organization should be correlated with the State health department, so that a unified health service would be the result.

As stated in the beginning of this discussion, "within certain limitations a people can have such hygienic conditions as they choose to buy." The one big essential is the appropriations. You may have a model law and an ideal plan for health organization, but without adequate appropriations the results will be disappointing. It then becomes the duty of Federal, State, and local health agencies and other groups interested in the health of the people to work together to demonstrate the value of health work, and to create such a public demand for it that the people will insist on the best and will be willing to pay the price.